



**National
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Clinical Bulletin

Information for Health Professionals

Complementary and Alternative Medicine in MS

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In the United States, there has been growing interest in what has become known as “alternative medicine,” especially among people with chronic diseases such as multiple sclerosis (MS). The use of unconventional therapies may be “complementary” (used in combination with conventional medicine) or “alternative” (used instead of conventional medicine). A broad term that includes both of these approaches is “complementary and alternative medicine,” or “CAM.”

Studies indicate that 50–60% of people with MS use some form of CAM. Popular CAM therapies include diets, dietary supplements, acupuncture, meditation, massage, and yoga. Approximately 90% of people with MS who use CAM also use conventional medicine. In other words, CAM is usually used in a complementary manner by people with MS. Unfortunately, MS patients may withhold information about their CAM use from their physicians.

Physicians often lack understanding about the use of CAM, and accurate information about CAM that is relevant to the treatment of MS is difficult to find. To address these gaps, the CAM Program was developed at the Rocky Mountain MS Center. This bulletin is based on information compiled from this source.

COMPLEMENTARY AND ALTERNATIVE THERAPIES

Herbal Medicine

Herbal therapy is one of the most accessible forms of CAM. Since herbs are not under strict FDA regulation, they should be used with caution.

There are several important principles about herbal therapy:

- ◆ Herbs are often used as drugs.
- ◆ Herbs contain many different compounds, some of which may be toxic or interact with other drugs.
- ◆ Herbs may contain compounds that have not been identified or characterized, and may be different from those on the label.

- ◆ The quality and composition of herbal preparations are variable.
- ◆ Herbs should only be used for a short time for benign, self-limited conditions.
- ◆ Herbs should be avoided in women who are pregnant or breastfeeding, people with multiple medical problems or taking multiple medications, and children.

Herbal preparations that may be effective include cranberry tablets for the prevention of urinary tract infections and psyllium for constipation (FDA approved). Valerian may be effective for insomnia. St. John's wort has long been widely used in Europe for the treatment of depression. While it may have a therapeutic effect for mild to moderate depression, it does not appear to be effective for severe depression and, due to its induction of the cytochrome P450 system, it may interact with multiple drugs, including oral contraceptives and medications for heart disease, seizures, and certain cancers. Kava kava may be effective for anxiety, but it should not be used because of possible severe hepatotoxicity.

Certain herbs might worsen MS or interact with medications. MS patients should use care with herbs that may have immune-stimulating activity, including alfalfa, astragalus, echinacea, garlic, and Asian ginseng. Patients who have fatigue or take sedating medications, such as lioresal (Baclofen), tizanidine (Zanaflex), and diazepam (Valium), should be careful about using potentially sedating herbs, which include chamomile, Asian and Siberian ginseng, goldenseal, kava kava, stinging nettle, passionflower, sage, St. John's wort, and valerian. Steroid side effects may be worsened by some herbs, including aloe, bayberry, Asian ginseng, and licorice. Herbs sometimes recommended for MS that may cause serious side effects include chaparral, comfrey, lobelia, and yohimbe.

Vitamins

There are theoretical reasons why antioxidant vitamins, which include vitamins A, C, and E, may be beneficial for MS. Antioxidant vitamins decrease the levels of free radicals, which, according to some evidence, may be a factor in the myelin and nerve damage that occurs in MS. On the other hand, antioxidants stimulate the immune system and this could be harmful for MS. MS can increase the risk for developing osteoporosis, and vitamin D and calcium are beneficial in this regard (for more detailed information, see Vitamin D and MS: Implications for Clinical Practice, Clinical Bulletin of the National Multiple Sclerosis Society, 2009, by Allen C. Bowling, MD, PhD. Available at www.nationalmssociety.org/for-professionals/healthcare-professionals/publications/clinical-bulletins/download.aspx?id=16342). There is no clear indication for the use of vitamin B12 therapy in MS, the exception being the rare patient who also has documented vitamin B12 deficiency.

High doses of some vitamins and minerals may produce toxic effects. Doses of vitamins and minerals to avoid include:

- ◆ Vitamin A (or beta-carotene): Greater than 10,000 IU daily may produce liver injury and other toxic effects, especially in pregnant women.
- ◆ Vitamin B6 (pyridoxine): Greater than 50 milligrams daily may produce nerve injury.
- ◆ Vitamin C: Greater than 2,500 milligrams daily may produce diarrhea and kidney stones.

- ◆ Vitamin D: Greater than 2,000 IU daily may produce liver injury, hypercalcemia, and other toxic effects.
- ◆ Selenium: Greater than 400 micrograms daily may produce multiple toxic effects.

In addition, vitamin A and beta-carotene should probably be avoided in smokers, and warfarin (Coumadin) should not be taken with coenzyme Q10, vitamin E, vitamin K, and possibly vitamin C.

Other Supplements

Zinc is sometimes used to prevent or limit the severity of the common cold. Often for unclear reasons, some CAM books recommend zinc supplements specifically for MS. In people with MS, it may be best to avoid or limit zinc supplements since zinc may stimulate specific cells in the immune system. Similarly, melatonin and DHEA, two hormones that are available as supplements, may activate the immune system.

Traditional Chinese Medicine

Traditional Chinese medicine includes acupuncture and herbal therapy. Acupuncture is increasingly recognized for its effectiveness in some types of pain and nausea, but studies in MS are limited. Chinese herbal medicine should be used cautiously and with a clear understanding of the effects of the herbs. Asian ginseng and astragalus are common components of Chinese herbal preparations; these herbs may stimulate the immune system. Another form of Chinese medicine, Chinese proprietary medicine, should probably be avoided since there are no well-established benefits in MS and some ingredients may be toxic.

Other Possibly Beneficial Therapies

Limited studies indicate that several, low-risk CAM therapies may be beneficial for people with MS. Cooling therapy, which involves the use of cooling suits, may improve some MS symptoms. Mind-body approaches, such as meditation, guided imagery, and yoga, may relieve anxiety and pain. Yoga may also be helpful for fatigue. T'ai chi, which is a Chinese exercise regimen that involves slow body movements and specific breathing techniques, may improve walking ability and decrease spasticity. Massage may be beneficial for anxiety, depression, pain, and spasticity. Horseback riding, known as hippotherapy, may provide multiple therapeutic effects. Rigorous clinical studies are needed to further evaluate the effectiveness of all of these therapies.

Miscellaneous Therapies Lacking Proven Benefit

Bee venom therapy did not produce beneficial clinical or MRI effects in a study in MS. Therapies in which there is no strong evidence for a beneficial effect in MS include calcium EAP, chelation therapy, craniosacral therapy, enemas, hyperbaric oxygen, and dental mercury amalgam removal.

PRINCIPLES OF CAM USE

Several guidelines should be followed when patients are considering CAM use:

- ◆ Consider conventional medicine first.
- ◆ Evaluate and directly address the reasons for wanting to use CAM.
- ◆ If CAM is chosen, direct the patient to keep the physician informed; monitor the response to the therapy; and discontinue therapy when appropriate.
- ◆ Stress caution to the patient.

THE PLACEBO EFFECT

In trials of immunomodulating agents, the “placebo effect” has been quite high, with a transient 30–40% reduction in relapses. In some symptomatic treatment trials, placebos have actually produced greater improvement than “active” medications. Some studies have even suggested that placebos produce beneficial effects on specific cells in the immune system.

The placebo effect demonstrates the powerful influence that the mind may have over the body (or brain). This mind–body effect may be under-utilized in conventional medicine and may be an important component of some forms of CAM.

A WELLNESS APPROACH

The influence of the mind over the body and CAM are two areas that may be incorporated into a more inclusive “wellness approach” that optimizes functioning in the different components of the MS patient’s life: health, physical fitness, psychological well-being, social connectedness, nutrition, sexuality, spirituality, and bowel and bladder function. These components are interwoven, and, in a state of wellness, there is a sense of wholeness and balance among them. A chronic disease such as MS may disrupt this wholeness and balance. Integration of neurological care with a wellness approach requires a multidisciplinary approach, including medical, psychological, nursing, dietetic, and rehabilitation services.

HYPE OR HOPE?

Does CAM use in MS provide hope or is it simply meaningless hype? The answer is “both.” Some therapies have produced promising results, others are excessively promoted but ineffective or unsafe, and a large number have yet to be studied carefully in people with MS. This large variability in the possible effectiveness of different therapies is the cause for much of the confusion and controversy in CAM. Improving the way in which CAM is used involves increasing communication between people with MS and health care professionals, providing accurate CAM information to people with MS, and conducting reliable studies to determine which therapies are effective.

ADDITIONAL INFORMATION

The CAM Program at the Rocky Mountain MS Center offers the following resources:

- ◆ Bowling AC. *Complementary and Alternative Medicine and Multiple Sclerosis* (2nd ed.). New York: Demos Medical Publishing, 2007.
- ◆ www.ms-cam.org: An interactive, regularly updated website devoted exclusively to CAM and MS.

Other helpful books and articles on CAM include:

- ◆ Cassileth B. *The Alternative Medicine Handbook*. Norton, 1998.
- ◆ Bowling AC, Stewart TM. Current complementary and alternative therapies of multiple sclerosis. *Curr Treatment Options Neurol* 2003; 5:55–68.
- ◆ Bowling AC, Stewart TM. *Dietary Supplements and Multiple Sclerosis: A Health Professional's Guide*. New York: Demos Medical Publishing, 2004.
- ◆ Jellin JM, Batz F, Hitchens K. *Natural Medicines Comprehensive Database*. Therapeutic Research Faculty, 2006.
- ◆ Polman CH, Thompson AJ, Murray TJ, et al. *Multiple Sclerosis: The Guide to Treatment and Management*. New York: Demos Medical Publishing, 2006.
- ◆ Sarubin A. *The Health Professional's Guide to Popular Dietary Supplements*. The American Dietetic Association, 2003.
- ◆ Spencer JW, Jacobs JJ. *Complementary/Alternative Medicine; An Evidence-Based Approach*. Mosby, 2003.

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